



**UNIVERSITAS NEGERI PADANG**  
 FACULTY OF MATHEMATICS AND NATURAL SCIENCE  
 MATHEMATICS DEPARTMENT, MATHEMATICS EDUCATION STUDY PROGRAM  
 Main Campus Universitas Negeri Padang.  
 Jalan Prof. Dr. Hamka Air Tawar Padang, Sumatera Barat  
 Phone: +62 751 7053902, Fax: +62 751 7055628  
 Email: matematika@fmipa.unp.ac.id

**Bachelor of Mathematics Education**

**MODULE HANDBOOK**

Module name:	Actuarial
Module level, if applicable:	Bachelor
Code:	MAT2.61.6103
Sub-heading, if applicable:	-
Classes, if applicable:	Actuarial
Semester:	6 <sup>th</sup> (sixth)
Module coordinator:	Dr. Suherman, S. Pd, M. Si.
Lecturer(s):	Dr. Suherman, S. Pd, M. Si., and Team
Language:	Bahasa Indonesia
Classification within the curriculum:	Program Study Elective Courses
Teaching format / class hours per week during the semester:	Teaching format : <ul style="list-style-type: none"> <li>• Lectures: Project Based Learning with methods such as Presentations, Group and Class Discussion, expository, presentation.</li> <li>• Structured assignment,</li> <li>• Independent activities, and</li> <li>• Practice.</li> </ul> 170 x 3 = 510 Minute = 8.50 hours
Workload:	16 weeks per semester include Midterm Exam and Final Exam which consist of: <ul style="list-style-type: none"> <li>• 1. 67 hours lectures (2 x 50 minutes) per week</li> <li>• 2 hours structured assignment (2 x 60 minutes) per week</li> <li>• 2 hours independent activities (2 x 60 minutes) per week</li> <li>• 2. 83 hours practice (1 x 170) per week</li> </ul> 16 x 170 x 3 = 8160 Minute =136 hours = 4.53 ECTS
Credit points:	3 SKS (4.53 ECTS)
Prerequisites course(s):	Mathematical Statistics 1

<p>Course outcomes:</p>	<p>After taking this course, the students have ability to:</p> <p>CO1. : Express the actuarial concept, value for money, interest, amortization, opportunity theory, mortality tables, annuities, pure endowment, life insurance, and net premium reserves</p> <p>CO2 : Interpret the actuarial concept, value for money, interest, amortization, opportunity theory, mortality tables, annuities, pure endowment, life insurance, and net premium reserves</p> <p>CO3 : Apply the actuarial concept, value for money, interest, amortization, opportunity theory, mortality tables, annuities, pure endowment, life insurance, and net premium reserves</p> <p>CO4 : Analyze the problems that connect to the actuarial concept, value for money, interest, amortization, opportunity theory, mortality tables, annuities, pure endowment, life insurance, and net premium reserves</p> <p>CO5 : Show responsibility attitude in independent studies</p> <p>CO6. : Maintain the responsibility attitude in team works</p>
<p>Content:</p>	<p>This course discusses:</p> <ol style="list-style-type: none"> <li>1. fundamentals of financial mathematics: interest, equation of value, fixed annuity.</li> <li>2. mathematical basics of life insurance: mortality table, life annuity, life insurance</li> </ol>
<p>Study/exam achievements:</p>	<p>The final mark will be weighted as follows:  Total Score = (25% x Midterm Exam) + (30% x Final Exam) + (25% x Project) + (20% x Affective Score Assessment)</p> <p>The initial cut - off points for grades A, A-, B+, B, B-, C+, C, C-, and D should not be less than 85, 80, 75, 70, 60, 60, 55, 50, and 40 out of 100 respectively.</p> <p><b>Explanation:</b></p> <p><b>1. Midterm Exam</b></p> <ul style="list-style-type: none"> <li>✓ Midterm Exam is held at the 9<sup>th</sup> meeting.</li> <li>✓ Midterm Exam is carried out in the classroom with an implementation time of 120 minutes according to the module schedule.</li> </ul> <p><b>2. Final Exam</b></p> <ul style="list-style-type: none"> <li>✓ Final Exam is held at the 16<sup>th</sup> meeting.</li> <li>✓ Final Exam is carried out in the classroom with an implementation time of 120 minutes which</li> </ul>

